

**IN THE CLAIMS:**

Please amend claims 7 and 15, and add new claims 27-32.

This listing of claims will replace all prior versions, and listings of the claims in the application.

**Listing of the claims**

1.     **(Previously presented)**     A composition comprising:  
        an isolated nucleic acid molecule that encodes an immunogen, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; and  
        an isolated nucleic acid molecule that encodes one or more proteins of selected from the group consisting of: Fos, c-jun, Sp-1, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, Ikb, Inactive NIK, SAP K, SAP-1, JNK, interferon response genes, NFkB, Bax, TRAIL, TRAILrec, TRAILrecDRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, Ox40, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof  
        wherein nucleic acid sequences that encode the immunogen occur on a separate nucleic acid molecules from nucleic acid sequences that encode one or more immunomodulatory proteins.
2.     **(Original)**     The composition of claim 1 wherein said nucleic acid molecules are plasmids.
3.     **(Canceled)**

4.     **(Previously presented)**     The composition of claim 1 wherein said immunogen is a pathogen antigen.
5.     **(Original)**     The composition of claim 4 wherein said immunogen is a herpes simplex antigen.
6.     **(Original)**     The composition of claim 5 wherein said herpes simplex antigen is HSV2gD.
7.     **(Currently amended)**     A composition comprising an isolated nucleic acid molecule comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; in combination with a separate nucleotide sequence that encodes one or more immunomodulating proteins operably linked to regulatory elements, wherein said immunomodulating proteins are selected from the group consisting of: Fos, c-jun, Sp-I, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, I $\kappa$ B, Inactive NIK, SAP K, SAP-1, INK, interferon response genes, NF $\kappa$ B, Bax, TRAIL, TRAIL<sub>rec</sub>, TRAIL<sub>rec</sub>DRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, O $\times$ 40, ~~O $\times$ 40-LIGAND~~, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof.
8.     **(Original)**     The composition of claim 7 wherein said nucleic acid molecule is a plasmid.
9.     **(Canceled)**
10.    **(Previously presented)**     The composition of claim 7 wherein said immunogen is a pathogen antigen.

11. **(Original)** The composition of claim 10 wherein said immunogen is a herpes simplex antigen.

12. **(Original)** The composition of claim 11 wherein said herpes simplex antigen is HSV2gD.

13. **(Previously presented)** An injectable pharmaceutical composition comprising the composition of claim 1.

14. **(Previously presented)** A method of inducing an immune response in an individual against an immunogen comprising administering to said individual a composition of claim 1.

15. **(Currently amended)** A recombinant vaccine comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; in combination with a separate, a nucleotide sequence that encodes one or more immunomodulating proteins operably linked to regulatory elements, wherein said immunomodulating proteins are selected from the group consisting of: Fos, c-jun, Sp-1, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, Ikb, Inactive NIK, SAP K, SAP-1, JNK, interferon response genes, NFkB, Bax, TRAIL, TRAILrec, TRAILrecDRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, Ox40, ~~Ox40 LIGAND~~, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, TAP2 and functional fragments thereof.

16. **(Canceled)**

17. **(Previously presented)** The recombinant vaccine of claim 15 wherein said immunogen is a pathogen antigen.

18. **(Original)** The recombinant vaccine of claim 17 wherein said recombinant vaccine is a recombinant vaccinia vaccine.

19. **(Original)** A method of inducing an immune response in an individual against an immunogen comprising administering to said individual a recombinant vaccine of claim 17.

20. – 21. **Canceled.**

22. **(Previously presented)** The composition of claim 1 wherein the isolated nucleic acid molecule that encodes one or more proteins encodes Ox40 or a functional fragment thereof.

23. **(Previously presented)** The composition of claim 7 wherein the isolated nucleic acid that encodes one or more proteins encodes Ox40 or a functional fragment thereof.

24. **(Previously presented)** The recombinant vaccine of claim 15 wherein the nucleotide sequence that encodes one or more proteins encode Ox40 or a functional fragment thereof.

25. **(Previously presented)** An injectable pharmaceutical composition comprising the composition of claim 7.

26. **(Previously presented)** A method of inducing an immune response in an individual against an immunogen comprising administering to said individual a composition of claim 7.

27. **(New)** The composition of claim 1 wherein the isolated nucleic acid molecule that encodes one or more proteins encodes Ox40.

28. **(New)** The composition of claim 7 wherein the isolated nucleic acid molecule that encodes one or more proteins encodes Ox40.

29. **(New)** The recombinant vaccine of claim 15 wherein the nucleotide sequence that encodes one or more proteins encode Ox40.

30. **(New)** The composition of claim 1 wherein the composition comprises:

an isolated nucleic acid molecule that encodes an immunogen, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; and

an isolated nucleic acid molecule that encodes one or more proteins of selected from the group consisting of: Fos, c-jun, Sp-1, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, IκB, Inactive NIK, SAP K, SAP-1, JNK, interferon response genes, NFκB, Bax, TRAIL, TRAIL<sub>rec</sub>, TRAIL<sub>rec</sub>DRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, Ox40, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, and TAP2,

wherein nucleic acid sequences that encode the immunogen occur on a separate nucleic acid molecules from nucleic acid sequences that encode one or more immunomodulatory proteins.

31. **(New)** The composition of claim 7 comprising an isolated nucleic acid molecule comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; in combination with a separate nucleotide sequence that encodes one or more immunomodulating proteins operably linked to regulatory elements, wherein said immunomodulating proteins are selected from the group consisting of: Fos, c-jun, Sp-1, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, IκB, Inactive NIK, SAP K, SAP-1, INK, interferon response genes, NFκB, Bax, TRAIL, TRAIL<sub>rec</sub>,

TRAILrecDRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, Ox40, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, and TAP2.

32. (New) The recombinant vaccine of claim 15 comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements, wherein said immunogen is a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases; in combination with a separate, a nucleotide sequence that encodes one or more immunomodulating proteins operably linked to regulatory elements, wherein said immunomodulating proteins are selected from the group consisting of: Fos, c-jun, Sp-1, Ap-1, Ap-2, p38, p65Rel, MyD88, IRAK, TRAF6, Ikb, Inactive NIK, SAP K, SAP-1, JNK, interferon response genes, NFkB, Bax, TRAIL, TRAILrec, TRAILrecDRC5, TRAIL-R3, TRAIL-R4, RANK, RANK LIGAND, Ox40, NKG2D, MICA, MICB, NKG2A, NKG2B, NKG2C, NKG2E, NKG2F, TAP1, and TAP2.